

## ABSTRACT

An amplifier circuit (100) includes a driver stage (120) with at least an active  
5 device (140) for pre-amplification and output of a pre-amplified signal; and an output stage  
(160) with at least an active device (180) for further amplification of the pre-amplified  
signal and output of an amplified signal. A phase shifter (155) shifts the phase of the pre-  
amplified signal. A detector (190) measures levels of forward and reflected parts of the  
amplified signal, and a gain and phase control circuit (145) independently and selectively  
10 controls and adjusts the phase shifter (155) for optimal amplifier performance and minimal  
difference between the forward and reflected signals. The gain and phase control circuit  
also independently and selectively controls and modifies the gain of the active devices  
(140, 180) of the driver and output stages (120, 160) as a function of the levels of the  
forward and reflected signals to substantially maintain constant linearity of the amplifier  
15 circuit (100) with load variations.